TABLE 5: SUMMARY OF MICROCOSM pH RESULTS
Asheville, NC

Treatment	Date	Day	Bottle	Treatment Replicate	pH
Anaerobic Sterile Control	29-Aug-14	0	1	ANSC-1	6.29
			2	ANSC-2	6.27
			3	ANSC-3	6.38
				Average	**6.31**
	12-Sep-14	14	1	ANSC-1	6.00
			2	ANSC-2	6.00
			3	ANSC-3	5.98
				Average	**5.99**
Anaerobic Active Control	29-Aug-14	0	4	ANAC-1	6.53
			5	ANAC-2	6.55
			6	ANAC-3	6.56
				Average	**6.55**
	12-Sep-14	14	4	ANAC-1	6.30
			5	ANAC-2	6.29
			6	ANAC-3	6.32
				Average	**6.30**
EDS-ER and Nutrimens Amended	29-Aug-14	0	7	EDS-ER/Nut-1	6.58
			8	EDS-ER/Nut-2	6.47
			9	EDS-ER/Nut-3	6.49
				Average	**6.51**
	12-Sep-14	14	7	EDS-ER/Nut-1	6.25
			8	EDS-ER/Nut-2	6.25
			9	EDS-ER/Nut-3	6.31
				Average	**6.27**
	26-Sep-14	28	7	EDS-ER/Nut-1	6.37
			8	EDS-ER/Nut-2	6.38
			9	EDS-ER/Nut-3	6.38
				Average	**6.38**

Notes:

ANAC - anaerobic active control
ANSC - anaerobic sterile control

Asheville, NC - Microcosm Study

Treatment	Date	Day	Replicate	Bottle	Chlorinated Ethenes						Chlorinated Ethanes			
					PCE	TCE	cDCE	VC	Ethene	Total Ethenes	1,1-DCA	CA	Ethane	Methane
					mg/L	mg/L	mg/L	mg/L	mg/L	mmol/bottle	mg/L	mg/L	mg/L	mg/L
Anaerobic Sterile Control	27-Aug-14	-2												
	28-Aug-14	-1												
	29-Aug-14	0	ANSC-1	1	0.87	0.012	<0.010	0.011	<0.010	--	0.47	<0.010	<0.010	0.18
			ANSC-2	2	0.88	0.02	<0.010	<0.010	<0.010	--	0.47	<0.010	<0.010	0.16
			ANSC-3	3	0.86	0.022	<0.010	<0.010	<0.010	--	0.47	<0.010	<0.010	0.13
			Average Concentration (mg/L)		0.87	0.018	ND	0.0038	ND	--	0.47	ND	ND	0.16
			Standard Deviation (mmoles)		1.2E-05	8.5E-06	0.0E+00	2.3E-05	0.0E+00	--	4.6E-06	0.0E+00	0.0E+00	1.4E-03
			Average Total mmoles		**0.0011**	**0.000028**	**ND**	**1.3E-05**	**ND**	**1.1E-03**	**0.00097**	**ND**	**ND**	**0.0073**
	12-Sep-14	14	ANSC-1	1	0.78	<0.010	<0.010	<0.010	<0.010	--	0.46	<0.010	<0.010	0.15
			ANSC-2	2	0.8	<0.010	<0.010	<0.010	<0.010	--	0.47	<0.010	<0.010	0.12
			ANSC-3	3	0.81	0.02	<0.010	<0.010	<0.010	--	0.47	<0.010	<0.010	0.1
			Average Concentration (mg/L)		0.8	0.0067	ND	ND	ND	--	0.47	ND	ND	0.12
			Standard Deviation (mmoles)		1.7E-05	1.9E-05	0.0E+00	0.0E+00	0.0E+00	--	1.6E-05	0.0E+00	0.0E+00	1.2E-03
			Average Total mmoles		**0.0011**	**0.000011**	**ND**	**ND**	**ND**	**1.1E-03**	**0.00097**	**ND**	**ND**	**0.0057**
Anaerobic Active Control	27-Aug-14	-2												
	28-Aug-14	-1												
	29-Aug-14	0	ANAC-1	4	0.91	0.038	<0.010	<0.010	<0.010	--	0.47	<0.010	<0.010	0.13
			ANAC-2	5	0.95	<0.010	<0.010	<0.010	<0.010	--	0.48	<0.010	<0.010	0.2
			ANAC-3	6	0.87	<0.010	<0.010	<0.010	<0.010	--	0.49	<0.010	<0.010	0.16
			Average Concentration (mg/L)		0.91	0.013	ND	ND	ND	--	0.48	ND	ND	0.16
			Standard Deviation (mmoles)		4.9E-05	3.5E-05	0.0E+00	0.0E+00	0.0E+00	--	1.5E-05	0.0E+00	0.0E+00	1.7E-03
			Average Total mmoles		**0.0012**	**0.00002**	**ND**	**ND**	**ND**	**1.2E-03**	**0.001**	**ND**	**ND**	**0.0074**
	12-Sep-14	14	ANAC-1	4	0.78	0.071	<0.010	<0.010	<0.010	--	0.5	<0.010	<0.010	0.098
			ANAC-2	5	0.73	0.027	<0.010	<0.010	<0.010	--	0.44	<0.010	<0.010	0.13
			ANAC-3	6	0.74	0.029	<0.010	<0.010	<0.010	--	0.47	<0.010	<0.010	0.094
			Average Concentration (mg/L)		0.75	0.043	ND	ND	ND	--	0.47	ND	ND	0.11
			Standard Deviation (mmoles)		3.7E-05	4.0E-05	0.0E+00	0.0E+00	0.0E+00	--	6.5E-05	0.0E+00	0.0E+00	1.0E-03
			Average Total mmoles		**0.00099**	**0.000068**	**ND**	**ND**	**ND**	**1.1E-03**	**0.00097**	**ND**	**ND**	**0.005**
Amended with EDS-ER and Nutrimens	27-Aug-14	-2												
	28-Aug-14	-1												
	29-Aug-14	0												
			EDS-ER/Nut-1	7	0.4	<0.010	<0.010	<0.010	<0.010	--	0.45	<0.010	<0.010	0.18
			EDS-ER/Nut-2	8	0.52	<0.010	<0.010	<0.010	<0.010	--	0.45	<0.010	<0.010	0.18
			EDS-ER/Nut-3	9	0.37	0.01	<0.010	<0.010	<0.010	--	0.44	<0.010	<0.010	0.15
			Average Concentration (mg/L)		0.43	0.0035	ND	ND	ND	--	0.45	ND	ND	0.17
			Standard Deviation (mmoles)		1.0E-04	9.7E-06	0.0E+00	0.0E+00	0.0E+00	--	1.8E-05	0.0E+00	0.0E+00	5.5E-04
			Average Total mmoles		**0.00056**	**5.6E-06**	**ND**	**ND**	**ND**	**5.7E-04**	**0.00092**	**ND**	**ND**	**0.0078**
	12-Sep-14	14	EDS-ER/Nut-1	7	0.31	0.051	<0.010	<0.010	<0.010	--	0.44	<0.010	<0.010	1.9
			EDS-ER/Nut-2	8	<0.010	<0.010	<0.010	0.12	0.013	--	0.66	<0.010	<0.010	2.8
			EDS-ER/Nut-3	9	<0.010	<0.010	<0.010	0.15	0.018	--	0.65	<0.010	<0.010	2.9
			Average Concentration (mg/L)		0.1	0.017	ND	0.09	0.01	--	0.58	ND	ND	2.6
			Standard Deviation (mmoles)		2.4E-04	4.7E-05	0.0E+00	2.8E-04	1.2E-04	--	2.6E-04	0.0E+00	0.0E+00	2.6E-02
			Average Total mmoles		**0.00014**	**0.000027**	**ND**	**0.00032**	**0.00014**	**6.3E-04**	**0.0012**	**ND**	**ND**	**0.12**
	26-Sep-14	28	EDS-ER/Nut-1	7	<0.010	0.11	<0.010	0.22	0.02	--	0.44	<0.010	<0.010	8.5
			EDS-ER/Nut-2	8	<0.010	<0.010	<0.010	<0.010	0.072	--	0.43	<0.010	<0.010	8.8
			EDS-ER/Nut-3	9	<0.010	<0.010	<0.010	<0.010	0.071	--	0.42	<0.010	<0.010	9.7
			Average Concentration (mg/L)		ND	0.038	ND	0.075	0.054	--	0.43	ND	ND	9
			Standard Deviation (mmoles)		0.0E+00	1.1E-04	0.0E+00	4.5E-04	3.9E-04	--	2.7E-05	0.0E+00	0.0E+00	3.0E-02
			Average Total mmoles		**ND**	**0.000061**	**ND**	**0.00026**	**0.00071**	**1.0E-03**	**0.00088**	**ND**	**ND**	**0.42**

Treatment	Date	Day	Replicate	Bottle	Chlorinated Ethenes						Chlorinated Ethanes			
					PCE	TCE	cDCE	VC	Ethene	Total Ethenes	1,1-DCA	CA	Ethane	Methane
					mg/L	mg/L	mg/L	mg/L	mg/L	mmol/bottle	mg/L	mg/L	mg/L	mg/L

Treatment	Date	Day	Replicate	Bottle	Chlorinated Ethenes						Chlorinated Ethanes			
					PCE	TCE	cDCE	VC	Ethene	Total Ethenes	1,1-DCA	CA	Ethane	Methane
					mg/L	mg/L	mg/L	mg/L	mg/L	mmol/bottle	mg/L	mg/L	mg/L	mg/L

TABLE 5: SUMMARY OF MICROCOSM pH RESULTS
Asheville, NC

Treatment	Date	Day	Bottle	Treatment Replicate	pH
Anaerobic Sterile Control	29-Aug-14	0	1	ANSC-1	6.29
			2	ANSC-2	6.27
			3	ANSC-3	6.38
				Average	**6.31**
	12-Sep-14	14	1	ANSC-1	6.00
			2	ANSC-2	6.00
			3	ANSC-3	5.98
				Average	**5.99**
	24-Oct-14	56	1	ANSC-1	6.26
			2	ANSC-2	6.28
			3	ANSC-3	6.24
				Average	**6.26**
Anaerobic Active Control	29-Aug-14	0	4	ANAC-1	6.53
			5	ANAC-2	6.55
			6	ANAC-3	6.56
				Average	**6.55**
	12-Sep-14	14	4	ANAC-1	6.30
			5	ANAC-2	6.29
			6	ANAC-3	6.32
				Average	**6.30**
	24-Oct-14	56	4	ANAC-1	6.59
			5	ANAC-2	6.62
			6	ANAC-3	6.64
				Average	**6.62**
EDS-ER and Nutrimens Amended	29-Aug-14	0	7	EDS-ER/Nut-1	6.58
			8	EDS-ER/Nut-2	6.47
			9	EDS-ER/Nut-3	6.49
				Average	**6.51**
	12-Sep-14	14	7	EDS-ER/Nut-1	6.25
			8	EDS-ER/Nut-2	6.25
			9	EDS-ER/Nut-3	6.31
				Average	**6.27**
	26-Sep-14	28	7	EDS-ER/Nut-1	6.37
			8	EDS-ER/Nut-2	6.38
			9	EDS-ER/Nut-3	6.38
				Average	**6.38**
	10-Oct-14	42	7	EDS-ER/Nut&KB-1-1	6.25
			8	EDS-ER/Nut&KB-1-2	6.09
			9	EDS-ER/Nut&KB-1-3	6.08
				Average	**6.14**
	24-Oct-14	56	7	EDS-ER/Nut&KB-1-1	6.35
			8	EDS-ER/Nut&KB-1-2	6.40
			9	EDS-ER/Nut&KB-1-3	6.39
				Average	**6.38**

Notes:

ANAC - anaerobic active control
ANSC - anaerobic sterile control

Asheville, NC - Microcosm Study

Treatment	Date	Day	Replicate	Bottle	Chlorinated Ethenes						Chlorinated Ethanes			Methane
					PCE	TCE	cDCE	VC	Ethene	Total Ethenes	1,1-DCA	CA	Ethane	Methane
					mg/L	mg/L	mg/L	mg/L	mg/L	mmol/bottle	mg/L	mg/L	mg/L	mg/L
Anaerobic Sterile Control	27-Aug-14	-2												
	28-Aug-14	-1												
	29-Aug-14	0	ANSC-1	1	0.87	0.012	<0.010	0.011	<0.010	--	0.47	<0.010	<0.010	0.18
			ANSC-2	2	0.88	0.02	<0.010	<0.010	<0.010	--	0.47	<0.010	<0.010	0.16
			ANSC-3	3	0.86	0.022	<0.010	<0.010	<0.010	--	0.47	<0.010	<0.010	0.13
			Average Concentration (mg/L)		0.87	0.018	ND	0.0038	ND	--	0.47	ND	ND	0.16
			Standard Deviation (mmoles)		1.2E-05	8.5E-06	0.0E+00	2.3E-05	0.0E+00	--	4.6E-06	0.0E+00	0.0E+00	1.4E-03
			Average Total mmoles		**0.0011**	**0.000028**	**ND**	**1.3E-05**	**ND**	**1.1E-03**	**0.001**	**ND**	**ND**	**0.0073**
	12-Sep-14	14	ANSC-1	1	0.78	<0.010	<0.010	<0.010	<0.010	--	0.46	<0.010	<0.010	0.15
			ANSC-2	2	0.8	<0.010	<0.010	<0.010	<0.010	--	0.47	<0.010	<0.010	0.12
			ANSC-3	3	0.81	0.02	<0.010	<0.010	<0.010	--	0.47	<0.010	<0.010	0.1
			Average Concentration (mg/L)		0.8	0.0067	ND	ND	ND	--	0.47	ND	ND	0.12
			Standard Deviation (mmoles)		1.7E-05	1.9E-05	0.0E+00	0.0E+00	0.0E+00	--	1.6E-05	0.0E+00	0.0E+00	1.2E-03
			Average Total mmoles		**0.0011**	**0.000011**	**ND**	**ND**	**ND**	**1.1E-03**	**0.001**	**ND**	**ND**	**0.0057**
	24-Oct-14	56	ANSC-1	1	0.76	<0.010	<0.010	<0.010	<0.010	--	0.46	<0.010	<0.010	0.14
			ANSC-2	2	0.76	0.011	<0.010	<0.010	<0.010	--	0.46	<0.010	<0.010	0.11
			ANSC-3	3	0.78	0.02	<0.010	<0.010	<0.010	--	0.46	<0.010	<0.010	0.095
			Average Concentration (mg/L)		0.77	0.01	ND	ND	ND	--	0.46	ND	ND	0.11
			Standard Deviation (mmoles)		1.9E-05	1.6E-05	0.0E+00	0.0E+00	0.0E+00	--	9.4E-06	0.0E+00	0.0E+00	9.6E-04
			Average Total mmoles		**0.001**	**0.000016**	**ND**	**ND**	**ND**	**1.0E-03**	**0.001**	**ND**	**ND**	**0.0053**
Anaerobic Active Control	27-Aug-14	-2												
	28-Aug-14	-1												
	29-Aug-14	0	ANAC-1	4	0.91	0.038	<0.010	<0.010	<0.010	--	0.47	<0.010	<0.010	0.13
			ANAC-2	5	0.95	<0.010	<0.010	<0.010	<0.010	--	0.48	<0.010	<0.010	0.2
			ANAC-3	6	0.87	<0.010	<0.010	<0.010	<0.010	--	0.49	<0.010	<0.010	0.16
			Average Concentration (mg/L)		0.91	0.013	ND	ND	ND	--	0.48	ND	ND	0.16
			Standard Deviation (mmoles)		4.9E-05	3.5E-05	0.0E+00	0.0E+00	0.0E+00	--	1.5E-05	0.0E+00	0.0E+00	1.7E-03
			Average Total mmoles		**0.0012**	**0.00002**	**ND**	**ND**	**ND**	**1.2E-03**	**0.001**	**ND**	**ND**	**0.0074**
	12-Sep-14	14	ANAC-1	4	0.78	0.071	<0.010	<0.010	<0.010	--	0.5	<0.010	<0.010	0.098
			ANAC-2	5	0.73	0.027	<0.010	<0.010	<0.010	--	0.44	<0.010	<0.010	0.13
			ANAC-3	6	0.74	0.029	<0.010	<0.010	<0.010	--	0.47	<0.010	<0.010	0.094
			Average Concentration (mg/L)		0.75	0.043	ND	ND	ND	--	0.47	ND	ND	0.11
			Standard Deviation (mmoles)		3.7E-05	4.0E-05	0.0E+00	0.0E+00	0.0E+00	--	6.5E-05	0.0E+00	0.0E+00	1.0E-03
			Average Total mmoles		**0.001**	**0.000068**	**ND**	**ND**	**ND**	**1.1E-03**	**0.001**	**ND**	**ND**	**0.005**
	24-Oct-14	56	ANAC-1	4	0.57	0.23	<0.010	<0.010	<0.010	--	0.45	<0.010	<0.010	0.1
			ANAC-2	5	0.41	0.3	<0.010	<0.010	<0.010	--	0.49	<0.010	<0.010	0.14
			ANAC-3	6	0.33	0.3	<0.010	<0.010	<0.010	--	0.52	<0.010	<0.010	0.097
			Average Concentration (mg/L)		0.44	0.28	ND	ND	ND	--	0.49	ND	ND	0.11
			Standard Deviation (mmoles)		1.6E-04	6.2E-05	0.0E+00	0.0E+00	0.0E+00	--	7.0E-05	0.0E+00	0.0E+00	9.8E-04
			Average Total mmoles		**0.0006**	**0.00045**	**ND**	**ND**	**ND**	**1.0E-03**	**0.001**	**ND**	**ND**	**0.0051**
Amended with EDS-ER and Nutrimens	27-Aug-14	-2												
	28-Aug-14	-1												
	29-Aug-14	0												
			EDS-ER/Nut-1	7	0.4	<0.010	<0.010	<0.010	<0.010	--	0.45	<0.010	<0.010	0.18
			EDS-ER/Nut-2	8	0.52	<0.010	<0.010	<0.010	<0.010	--	0.45	<0.010	<0.010	0.18
			EDS-ER/Nut-3	9	0.37	0.01	<0.010	<0.010	<0.010	--	0.44	<0.010	<0.010	0.15
			Average Concentration (mg/L)		0.43	0.0035	ND	ND	ND	--	0.45	ND	ND	0.17
			Standard Deviation (mmoles)		1.0E-04	9.7E-06	0.0E+00	0.0E+00	0.0E+00	--	1.8E-05	0.0E+00	0.0E+00	5.5E-04
			Average Total mmoles		**0.0006**	**5.6E-06**	**ND**	**ND**	**ND**	**5.7E-04**	**0.0009**	**ND**	**ND**	**0.0078**
	12-Sep-14	14	EDS-ER/Nut-1	7	0.31	0.051	<0.010	<0.010	<0.010	--	0.44	<0.010	<0.010	1.9
			EDS-ER/Nut-2	8	<0.010	<0.010	<0.010	0.12	0.013	--	0.66	<0.010	<0.010	2.8
			EDS-ER/Nut-3	9	<0.010	<0.010	<0.010	0.15	0.018	--	0.65	<0.010	<0.010	2.9
			Average Concentration (mg/L)		0.1	0.017	ND	0.09	0.01	--	0.58	ND	ND	2.6
			Standard Deviation (mmoles)		2.4E-04	4.7E-05	0.0E+00	2.8E-04	1.2E-04	--	2.6E-04	0.0E+00	0.0E+00	2.6E-02
			Average Total mmoles		**0.0001**	**0.000027**	**ND**	**0.00032**	**0.0001**	**6.3E-04**	**0.0012**	**ND**	**ND**	**0.12**
	26-Sep-14	28	EDS-ER/Nut-1	7	<0.010	0.11	<0.010	0.22	0.02	--	0.44	<0.010	<0.010	8.5
			EDS-ER/Nut-2	8	<0.010	<0.010	<0.010	<0.010	0.072	--	0.43	<0.010	<0.010	8.8
			EDS-ER/Nut-3	9	<0.010	<0.010	<0.010	<0.010	0.071	--	0.42	<0.010	<0.010	9.7
			Average Concentration (mg/L)		ND	0.038	ND	0.075	0.054	--	0.43	ND	ND	9
			Standard Deviation (mmoles)		0.0E+00	1.1E-04	0.0E+00	4.5E-04	3.9E-04	--	2.7E-05	0.0E+00	0.0E+00	3.0E-02
			Average Total mmoles		**ND**	**0.000061**	**ND**	**0.00026**	**0.0007**	**1.0E-03**	**0.0009**	**ND**	**ND**	**0.42**
	10-Oct-14	42	EDS-ER/Nut-1	7	<0.010	<0.010	<0.010	0.017	0.057	--	0.41	0.016	<0.010	24
			EDS-ER/Nut-2	8	<0.010	<0.010	<0.010	<0.010	0.061	--	0.41	0.01	<0.010	22
			EDS-ER/Nut-3	9	<0.010	<0.010	<0.010	<0.010	0.067	--	0.41	0.012	<0.010	25
			Average Concentration (mg/L)		ND	ND	ND	0.0058	0.061	--	0.41	0.013	ND	24
			Standard Deviation (mmoles)		0.0E+00	0.0E+00	0.0E+00	3.5E-05	6.7E-05	--	7.2E-06	9.6E-06	0.0E+00	6.2E-02
			Average Total mmoles		**ND**	**ND**	**ND**	**0.00002**	**0.0008**	**8.3E-04**	**0.0008**	**4.2E-05**	**ND**	**1.1**
	24-Oct-14	56	EDS-ER/Nut-1	7	<0.010	<0.010	<0.010	<0.010	0.029	--	0.34	0.039	<0.010	36
			EDS-ER/Nut-2	8	<0.010	<0.010	<0.010	<0.010	0.043	--	0.37	0.031	<0.010	50
			EDS-ER/Nut-3	9	<0.010	<0.010	<0.010	<0.010	0.034	--	0.36	0.031	<0.010	55
			Average Concentration (mg/L)		ND	ND	ND	ND	0.035	--	0.35	0.034	ND	47
			Standard Deviation (mmoles)		0.0E+00	0.0E+00	0.0E+00	0.0E+00	9.9E-05	--	2.9E-05	1.4E-05	0.0E+00	4.6E-01
			Average Total mmoles		**ND**	**ND**	**ND**	**ND**	**0.0005**	**4.7E-04**	**0.0007**	**0.00011**	**ND**	**2.2**